little narrower in the middle, nearly obsoletely striate-punctate, punctures minute, intervals of the striæ feebly raised; body beneath and legs dark brown, glossy, with a thin greyish pubescence. Length 9 lines.

EXPLANATION OF PLATE XII.

Fig. 1. *Tyndarisus longitarsus.*
Fig. 2. *Altes binodosus*: 2 *a*, the same in profile.
Fig. 3. *Mithippia aurita*: 3 *a*, meso- and metasterna.
Fig. 4. *Helæus squamosus.*
Fig. 5. *Barytipha socialis.*
Fig. 6. *Hectus anthracinus.*

[To be continued.]

XXXVIII.—*Notes on a few Hebridean Sponges, and on a new* Desmacidon *from Jersey.* By the Rev. A. M. Norman, M.A.

At the time when my report on Hebridean Dredging was published * the few sponges which had been obtained were still unexamined. So little is yet known of the distribution of the Porifera that any contribution towards a knowledge of their geographical range, however slight, has its value; and for this reason I publish the following brief notes of the species observed in the expedition referred to, not without the hope that the extreme imperfection of this record may induce naturalists who may hereafter visit the Hebrides to pay some attention to this much neglected branch of marine zoology.

Class **Porifera.**

Order Calcarea.

Grantia compressa (Fabr.).

G. ciliata (Fabr.). This and the foregoing common between tidemarks, Tobermory and Oban.

G. ensata, Bow. A rare species, only previously observed in the Channel Islands. A specimen found between tidemarks at Tobermory identified by Dr. Bowerbank.

Leucosolenia coriacea (Montagu). This species seems to vary marvellously in colour. In other localities I have found it white and of a bright lemon-colour; but as found at Tobermory it was violet; and yet further in the 'British

* "Report of the Committee appointed for the purpose of Exploring the Coasts of the Hebrides by means of the Dredge.—Part II. On the Crustacea, Echinodermata, Polyzoa, Actinozoa, and Hydrozoa," Report of the British Association, 1866 (1867), pp. 193–206.

Spongiadæ' it is recorded as dark crimson, dirty bluish-grey, and deep nut-brown!

Leuconia nivea (Grant). Tidemarks, Tobermory.

Order Silicea.

Normania crassa, Bowerbank. This is a new genus, of which a description will be found in my Shetland Dredging Report [*vide* British Association Report, 1868 (1869)]. The type specimen measures six inches long, two and a quarter high, and rather less across. It is massive, but shows a tendency to assume a cup-like form. The Minch specimen is one inch and a half long and as much in height, and is massive. It is not in such fine condition as the type, having been rolled and somewhat water-worn. The genus is intermediate in character between *Pachymatisma* and *Ecionemia*.

Polymastia mamillaris (Müller). Dredged in the Minch; specimens small.

Tethea cranium (Müller). Dredged in the deeper parts of the Minch, where it occurs in company with many other species which are found associated with it in the Shetland seas,—e. g. *Phakellia ventilabrum*, *Isodictya infundibuliformis* and *laciniosa*, *Normania crassa*, *Trochus occidentalis*, *Chemnitzia eximia*, *Scissurella crispata*, *Crangon serratus*, *Hippolyte cultellata*, *Caberea Ellisii*, *Lepralia polita*, *laqueata*, and *crystallina*, *Idmonea atlantica*, *Hornera borealis*, &c., which species, with three exceptions, are not as yet known to occur further south than the Minch.

Dictyocylindrus stuposus (Ellis & Sol.). Young specimens, but in very fine condition, dredged in the Minch.

Phakellia ventilabrum (Linn.). Very fine in the Minch.

Hymedesmia radiata, Bow. On a valve of *Pecten islandicus* dredged in the Minch. The type and only other known specimens are from the Shetland Haaf.

Hymeniacidon aurea (Montagu). Between tidemarks, Tobermory; the specimens of a scarlet colour.

H. ficus (Esper). A small specimen, between tidemarks, Oban; the first time that I have met with the species under such circumstances.

Cliona celata, Grant. Dredged in the Minch and Sleat Sound.

Halichondria panicea (Pallas). Tidemarks, common, as everywhere.

H. Pattersonii, Bow. Off Loch Ewe, in company with *Antedon celticus*, *Holothuria intestinalis*, *Poromya granulata*, and other interesting animals, in some abundance. Colour a very dark brown.

"*Halichondria expansa*, Bowerbank, n. sp.

"Sponge compressed, expanding laterally, parasitical. Surface smooth and even. Oscula simple, minute, dispersed. Pores inconspicuous. Dermis furnished with a stout irregular network; rete composed of broad flat polyspiculous fasciculi; spicula fusiformi-cylindrical, terminations incipiently spinous, spines very minute; tension-spicula acerate, long, and slender, frequently flexuous, basal terminations incipiently spinous, few in number; retentive spicula bidentate, inequianchorate, minute, and few in number. Skeleton rather compact; rete variable, containing from one or two to five or six spicula; spicula fusiformi-acerate, rather stout, incipiently entirely spinous, base prominently spinous. Interstitial membranes pellucid; tension and retentive spicula the same as those of the dermal membrane, few in number. Gemmules membranous, aspiculous.

"Colour in the dried state dark brown.

"*Hab.* Skye (Rev. A. M. Norman).

"Examined in the dried state."

The type specimen is attached to the hydrocaulus of *Diphasia pinaster*, dredged in the Sound of Skye, in the form of two triangular expansions, each about three-quarters of an inch in the greatest diameter.

Isodictya cinerea (Grant). This is another species which seems to vary greatly in colour. The Tobermory examples were brown.

I. infundibuliformis (Johnston). In deep water, the Minch.

I. laciniosa, Bowerbank, n. sp. [*vide* Norman, Shetland Dredging Report, Brit. Assoc. Report, 1868 (1869)]. The Shetland type on which this species is established is one of the largest and, at the same time, one of the most elegant of British Porifera. A small water-worn fragment procured in the Minch gives proof of the existence of the species among the Hebrides.

Order Keratosa.

Chalina seriata (Grant). Tidemarks, Tobermory, on the underside of large stones.

Dysidea fragilis (Montagu). A very curious form of this species occurred between tidemarks at Tobermory. It incrusts stones with a thin layer, and is almost entirely devoid of the particles of sand which are generally found abundantly incorporated in the substance of the Sponge.

It will be seen in the foregoing list how strongly the northern influence shows itself in the Sponges of this part of the west of Scotland; at the same time I think that we may perhaps see, in the presence of *Leuconia nivea*, *Grantia ensata*, and *Chalina seriata*, evidence of the same intermixture of southern and northern forms among the Porifera which we know to occur in other classes of the Hebridean invertebrata.

I take this opportunity of publishing the description of a new sponge from Jersey. The specimen was procured in 1859; and having recently examined it I found it to differ from other species known to me, and therefore sent it to Dr. Bowerbank for his opinion. He has kindly supplied me with the following description:—

"*Desmacidon copiosus*, Bowerbank, n. sp.

"Sponge sessile, coating. Surface rugged and uneven. Oscula simple, dispersed. Pores inconspicuous. Dermis subcrustaceous; dermal membrane pellucid, profusely spiculous, furnished with a stout irregular network; rete polyspiculous, areas abundantly supplied with spicula; tension-spicula tricurvate, acerate, small and slender, equicurvate, rather numerous; retentive spicula simple, contorted, and reversed bihamate, very numerous and rarely biumbonate-bihamate, large and stout; also inequidentato-palmate anchorate, and bidentate inequianchorate, both forms very minute and few in number, dispersed. Skeleton irregular and very open; fibre stout; spicula subclavate, fusiformi-acerate, stout, and very fusiform; areas large and profusely spiculous; tension-spicula subclavate, fusiformi-acerate, long and slender, exceedingly numerous and closely matted together; also tricurvate acerate, small and slender, few in number; retentive spicula the same as in the dermal membrane, but more copiously distributed. Gemmules membranous, aspiculous.

"Colour in the dried state cream-white.

"*Hab.* Jersey (Rev. A. M. Norman, 1859).

"Examined in the dried state."